

## **EXHIBIT F**

**SUBSURFACE HYDROCARBON ASSESSMENT REPORT**

BP Service Station Number 4318  
113-40 Merrick Boulevard  
St. Albans, New York

NYSDEC Spill Number 03-08006

April 15, 2004

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BTEX concentrations were not detected, and the maximum MTBE and total VOC concentrations were detected at SB-3.

## 6.2 Ground Water Analytical Results (March 9, 2004)

On March 9, 2004, ten (10) ground water samples (MW-1 through MW-10) were collected from the ten (10) temporary monitoring wells (MW-1 through MW-10, respectively). The ground water samples were submitted to Accutest for analysis of VOCs according to EPA Method 8260.

The laboratory analytical results for the ground water samples collected on March 9, 2004 are provided in Table 2. Analytical results in bold exceed applicable NYSDEC Ground Water Quality Standards (GWQS). The Laboratory Analytical Results Report for these ground water samples is provided in Appendix E.

Table 2- Ground Water Analytical Results (March 9, 2004)

| Analytical Parameter   | NYSDEC<br>GWQS (µg/l) <sup>1</sup> | Monitoring Well Locations and Concentrations (µg/l) |        |        |        |        |
|------------------------|------------------------------------|---|--------|--------|--------|--------|
|                        |                                    | MW-1  | MW-2   | MW-3   | MW-4   | MW-5   |
| <b>VOCs (µg/l)</b>     |                                    |   |        |        |        |        |
| Benzene                | 1                                  | 716   | 806    | 155    | 10.5   | 1.3    |
| Toluene                | 5                                  | 252   | 344    | 940    | 2.1    | 0.49 J |
| Ethylbenzene           | 5                                  | 3,010   | 1,600  | 1,550  | 0.6 J  | <1     |
| Xylenes                | 5                                  | 7,460   | 6,530  | 5,710  | 14.8   | 2      |
| Total BTEX             | NGV                                | 11,438  | 9,280  | 8,355  | 28     | 4      |
| MTBE                   | 10                                 | 6,120   | 65,900 | 7,970  | 25.2   | 200    |
| n-Butylbenzene         | 5                                  | 17.2 J  | <250   | 25.6 J | 3 J    | 2.5 J  |
| sec-Butylbenzene       | 5                                  | 11.2 J  | <250   | 21.1 J | 16.6   | 14.6   |
| tert-Butylbenzene      | 5                                  | <130  | <250   | <100   | 2.2 J  | <5     |
| Isopropylbenzene       | 5                                  | 96.6  | 86.6 J | 142    | 20.4   | 28.5   |
| p-Isopropyltoluene     | 5                                  | <130  | <250   | 11.6 J | <5     | <5     |
| Naphthalene            | 10                                 | 763   | 721    | 712    | 1.7 J  | <5     |
| n-Propylbenzene        | 5                                  | 252   | 234 J  | 386    | 18.3   | 25.5   |
| 1,2,4-Trimethylbenzene | 5                                  | 1,850   | 2,090  | 2,440  | 0.43 J | 5.8    |
| 1,3,5-Trimethylbenzene | 5                                  | 456   | 490    | 675    | <5     | 0.52 J |
| Total VOCs             | NGV                                | 21,004  | 78,802 | 20,738 | 116    | 281    |

1. Guidance value for VOCs is the NYSDEC GWQS based on NYSDEC's TAGM, dated January 24, 1994, revised August 22, 2001.

Other than BTEX and MTBE, only compounds detected in at least one sample are shown.

< - Not detected at or above indicated laboratory reporting limit.

Total BTEX and Total VOCs - Sum of all BTEX concentrations and sum of all VOC concentrations, rounded.

NGV - No guidance value available for this parameter.

ND - Not detected.

J - Laboratory estimated value.

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Table 2 Cont. - Ground Water Analytical Results (March 9, 2004)

| Analytical Parameter   | NYSDEC<br>GWQS (µg/l) <sup>1</sup> | Monitoring Well Locations and Concentrations (µg/l) |        |        |        |        |
|------------------------|------------------------------------|---|--------|--------|--------|--------|
|                        |                                    | MW-6  | MW-7   | MW-8   | MW-9   | MW-10  |
| VOCs (µg/l)            |                                    |   |        |        |        |        |
| Benzene                | 1                                  | 112   | 3.3    | 0.77 J | <1     | <1     |
| Toluene                | 5                                  | 32.6  | 0.48 J | <1     | <1     | <1     |
| Ethylbenzene           | 5                                  | 191   | 1.2    | 1.9    | <1     | <1     |
| Xylenes                | 5                                  | 140   | 2.8    | 3.6    | 0.56 J | <1     |
| Total BTEX             | NGV                                | 476   | 8      | 6      | 0.5    | ND     |
| MTBE                   | 10                                 | 1,440   | 43.6   | 18.6   | <1     | 1.1    |
| n-Butylbenzene         | 5                                  | 26.5 J  | 12.9   | 18.3   | <5     | 0.68 J |
| sec-Butylbenzene       | 5                                  | 22.9 J  | 23.6   | 18     | <5     | 0.52 J |
| tert-Butylbenzene      | 5                                  | <50   | 3.2 J  | 1.6 J  | <5     | <5     |
| Isopropylbenzene       | 5                                  | 137   | 116    | 13.2   | <2     | 0.78 J |
| p-Isopropyltoluene     | 5                                  | 16.3 J  | 1 J    | <5     | <5     | <5     |
| Naphthalene            | 10                                 | 665   | <5     | 2.3 J  | <5     | <5     |
| n-Propylbenzene        | 5                                  | 337   | 205    | 23.6   | <5     | 1.8 J  |
| 1,2,4-Trimethylbenzene | 5                                  | 1,120   | <5     | 2.6 J  | <5     | <5     |
| 1,3,5-Trimethylbenzene | 5                                  | 779   | 1 J    | 0.92 J | <5     | <5     |
| Total VOCs             | NGV                                | 5,020   | 414    | 105    | 0.5    | 5      |

1. Guidance value for VOCs is the NYSDEC GWQS based on NYSDEC's TAGM, dated January 24, 1994, revised August 22, 2001.

Other than BTEX and MTBE, only compounds detected in at least one sample are shown.

< - Not detected at or above indicated laboratory reporting limit.

Total BTEX and Total VOCs - Sum of all BTEX concentrations and sum of all VOC concentrations, rounded.

NGV - No guidance value available for this parameter.

ND - Not detected.

J - Laboratory estimated value.

As shown in Table 2, laboratory analysis of these ground water samples identified between six (6) and thirteen (13) VOC concentrations in excess of applicable NYSDEC GWQS in eight (8) of the ten (10) ground water samples (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8). Specifically, one (1) or more BTEX concentrations in excess of applicable NYSDEC GWQS were identified in seven (7) of the ten (10) ground water samples (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7), and MTBE concentrations in excess of the applicable NYSDEC GWQS were identified in eight (8) ground water samples (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8). The total BTEX concentrations in the ground water samples ranged from not detected in MW-10 to 11,438 micrograms per liter (µg/l) in MW-1. The total VOC concentrations in the ground water samples ranged from 0.5 µg/l in MW-9 to 78,802 µg/l in MW-2.

Figure 5, Appendix A, Ground Water Analytical Results Map, illustrates the distribution of BTEX, MTBE, and total VOCs present in the ground water during the March 9, 2004 sampling event. Figure 5 indicates that the maximum total BTEX concentration was identified in monitoring well MW-1, the maximum MTBE concentration was identified in monitoring well MW-2, and the maximum total VOC concentration was identified in monitoring well MW-2.